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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/639,383 08/14/00 COHEN

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MMC2/1220

EXAMINER

WIMER, M

ART UNIT

PAPER NUMBER

2821

DATE MAILED:

12/20/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
**09/639,383**

Applicant(s)  
**Cohen**

Examiner  
**Michael Wimer**

Group Art Unit  
**2821**



☒ Responsive to communication(s) filed on 8/14/00

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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### DETAILED ACTION

1. The disclosure is objected to because of the following informalities:

On page 1, first paragraph, it is suggested to update the status of the application, include the two continuation applications and the U.S. Patent that issued thereon.

Appropriate correction is required.

2. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 6, the language "definable" is unclear. It appears that this language should be -- defined--, because that is what defines the antenna element's structure.

In line 11, the language, "wherein replication" is unclear. It does not refer to the first or second replications recited in the claim.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Du Hamel et al (3079602).

Regarding Claim 1, Du Hamel et al show in Figs. 1,2,11 and 12, a fractal antenna defined as at least one dipole element having a portion shaped as a first motif (tooth) defined in two

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dimensions and it includes a first replication (e.g., 10a in Fig. 1) of the motif (tooth) and a second replication (e.g., 10b in Fig. 1) of the first motif (tooth), such that a point chosen on a geometric figure represented by the motif results in a corresponding point on the first replication and on the second replication of the motif, wherein either or both replication includes at least one operation:

- (a) scaling size of the motif (teeth are scaled along the dimension of the dipole arm),
- (b) rotating the motif (arm 10 is rotated relative to arm 11 in Fig. 1), and
- (c) translating the motif (the teeth are alternating along axis 13), the replication excludes a set of operations on a motif in which each operation is referenceable to a single point on the motif (the set does not reference a single point on the motif), and includes a conductive element 11, spaced apart from the fractal antenna 10 to influence the resonant frequency and bandwidth of the antenna system, all arranged as claimed.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Du Hamel et al (3079602).

Regarding Claim 1, Du Hamel et al show in Figs. 1, 2, 11 and 12, a fractal antenna defined as at least one dipole element having a portion shaped as a first motif (tooth) defined in two dimensions and it includes a first replication (e.g., 10a in Fig. 1) of the motif (tooth) and a second

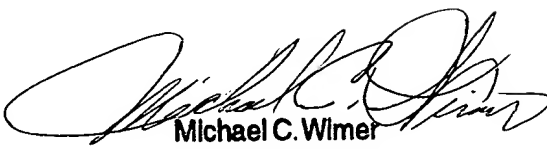
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replication (e.g., 10b in Fig. 1) of the first motif (tooth), such that a point chosen on a geometric figure represented by the motif results in a corresponding point on the first replication and on the second replication of the motif, wherein either or both replication includes at least one operation:

- (a) scaling size of the motif (teeth are scaled along the dimension of the dipole arm),
- (b) rotating the motif (arm 10 is rotated relative to arm 11 in Fig.1), and
- (c) translating the motif (the teeth are alternating along axis 13), the replication excludes a set of operations on a motif in which each operation is referenceable to a single point on the motif (the set does not reference a single point on the motif), and includes a conductive element 11, spaced apart from the fractal antenna 10 to influence the resonant frequency and bandwidth of the antenna system. It is well established that a nearby element, such as element 11, effects the resonant frequency and bandwidth of the antenna system. A skilled artisan would have recognized as obvious that element 11 influences the antenna system as claimed.

MCW/ 12-11-2000

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Michael C. Wimer  
Primary Examiner